

Application No.: 09/992,665

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1-66. (Cancelled)

67. (Currently Amended) A method of testing a host for a cancer, the method comprising testing a sample obtained from the host for an autoimmune response against a plurality of transcription factor types, to thereby determine from a result of the testing that the host has ~~[[a]]~~ the cancer and to thereby further determine a type of the cancer, wherein each of the plurality of transcription factor types are chemically distinct from each other.

68. (Previously Presented) The method of Claim 67, wherein the sample is a tissue or a bodily fluid.

69. (Previously Presented) The method of Claim 67, wherein the sample is a bodily fluid chosen from the group consisting of blood, tears, semen, saliva, serum, and urine.

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70. (Currently Amended) The method of Claim 69, wherein testing the sample for the autoimmune response comprises ~~using~~ testing the sample ~~[[for]]~~ to detect ~~[[an]]~~ autoantibodies~~[[y]]~~ against the plurality of transcription factor types.

71. (Currently Amended) The method of Claim 67, wherein the ~~at least one~~ plurality of transcription factor types are immobilized for the testing the sample.

72. (Previously Presented) The method of Claim 71, wherein the testing the sample comprises a dot blot, a slot blot, or an enzyme-linked immunoabsorbent assay.

73-74. (Cancelled)

75. (Currently Amended) The method of Claim 67 ~~[[74]]~~, wherein the cancer ~~[[cell]]~~ is a lung cancer ~~[[cell]]~~, small cell lung cancer ~~[[cell]]~~, a non small cell lung cancer ~~[[cell]]~~, an astrocytoma, a neuroblastoma, a glioblastoma, or a prostate cancer ~~[[cell]]~~.

76-77. (Cancelled)

78. (Currently Amended) The method of Claim~~[[77]]~~ 70, wherein ~~detecting~~ antibodies testing the sample to detect autoantibodies against the plurality of transcription ~~factors in the sample~~ factor types comprises using the plurality of transcription factor types to detect the antibodies.

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79. (Currently Amended) The method of Claim ~~[[77]]~~ 70, wherein ~~detecting antibodies testing the sample to detect autoantibodies~~ against the plurality of transcription factor types ~~in the sample~~ comprises using an array of peptides against which the presence of the antibodies is detected.

80. (Currently Amended) The method of Claim 67 ~~[[77]]~~, wherein the plurality of the transcription factor types comprises at least four ~~antibodies against the~~ transcription factor types ~~are detected~~.

81. (Previously Presented) The method of Claim 67, wherein the host is a human.

82. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types perturbs chromatin structure to permit access of transcriptional components to a gene.

83. (Withdrawn, Currently Amended) The method of Claim 82, wherein the at least one of the plurality of transcription factor types that perturb chromatin structure to permit access of transcriptional components to a gene are chosen from the group consisting of NURF, CHRAC, ACF, SWI/SNF complex, and SWI/SNF-related (RUSH) proteins.

84. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is involved in the recruitment of a TATA-binding protein (TBP)-containing or not-containing (Initiator) complexes.

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85. (Withdrawn, Currently Amended) The method of Claim[[82]] 84, wherein the at least one of the plurality of transcription factor types that is involved in the recruitment of a TATA-binding protein (TBP)-containing or not-containing (Initiator) complexes are chosen from the group consisting of TFIIB, TFIIID, TFIIE, TFIIIF, and TFIIII, TRP, and TRF2.

86. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is a TATA-binding protein.

87. (Withdrawn, Currently Amended) The method of Claim [[67]] 86, wherein the TATA binding protein is chosen from the group consisting of a TAFIIA complex, TAFIIAa, TAFIIAb, TAFIIAg, a TAFIIB complex, TAFIIB, RAP74, RAP30, a TAFs forming the TFIIID complex, TAFII250, CTF150, TAFII130/135, TAFII100, TAFII70/80, TAFII31/32, TAFII20, TAFII15, TAFII28, TAFII68, TAFII55, TAFII30, TAFII18, TAFII105, a TAFIIE complex, TAFIIEa, TAFIIEb, a TAFIIF complex, p62, p52, MAT1, p34, XPD/ERCC2, p44, XPB/ERCC3, Cdk7, CyclinH, a RNA polymerase II complex, hRPB1, hRPB2, hRPB3, hRPB4, hRPB5, hRPB6, hRPB7, hRPB8, hRPB9, hRPB10, hRPB11, and hRPB12.

88. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types forms a coactivator complex with TRAP, DRIP, ARC, CRSP, Med, SMCC, or NAT.

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89. (Withdrawn, Currently Amended) The method of Claim 88, wherein the at least one of the plurality of transcription factor types forms a coactivator complex with TRAP, DRIP, ARC, CRSP, Med, SMCC, or NAT is chosen from the group consisting of TRAP240/DRIP250, TRAP230/DRIP240, DRIP205/CRSP200/TRIP2/PBP-/RB18A/TRAP220, hRGR1/CRSP150/DRIP150/TRAP170, TRAP150, CRSP130/hSur-2/DRIP130, TIG-1,; CRSP100/TRAP100/DRIP100, DRIP97, DRIP92/TRAP95, CRSP85, CRSP77/DRIP77/TRAP80, CRSP70/DRIP70, Ring3, hSRB10/hCDK8, DRIP36/hMEDp34, CRSP34, CRSP33/hmE7, hMED6, hSRB11/hCyclin C, hSOH1, and hSRB7.

90. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is a protein of the androgen receptor complex.

91. (Withdrawn) The method of Claim 90, wherein the protein of the androgen receptor complex is a member of the group consisting of ANPK, ARIP3, PIAS family, PIASalpha, PIASbeta, PIASgamma, ARIP4.

92. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is a transcriptional co-repressor.

93. (Withdrawn) The method of Claim 92, wherein the transcriptional co-repressor is chosen from the group consisting of N-CoR family, SMRT family,

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NCOR2/SMRT/TRAC1/CTG26/TNRC14/SMRTE, REA, MSin3, HDAC family, and HDAC5.

94. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of bHLH, suUSF, AP4, E-protein, E2A/E12, E47, HEB/ME1, HEB2/ME2/MITF-2A,B,C/SEF-2/TFE/TF4/R8f, TFE family, TFE3, TFEB, Myc family, Max family, Mad families, and WBSR14.

95. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of neurogenins, Neurogenin-1/MATH4c, Neurogenin-2/MATH4a, Neurogenin-3/MATH4b, NeuroD, NeuroD-1, NeuroD-2, NeuroD-3(6)/my051/NEX1/MATH2/Dlx-3, NeuroD-4/ATH-3/NeuroM), ATH, ATH-1/MATH1, ATH-5/MATH5, ASH, ASH-1/MASH1, ASH-2/LASH2, ASCL-3/reserved, NSCL, NSCL1/HEN1, NSCL2/HEN2, HAND, Hand1/eHAND/Thing-1, Hand2/dHAND/Thing-2, Mesencephalon-Olfactory Neuronal bHLHs, COE proteins, COE1, COE2/Olf-1/EBF-LIKE3, COE3/Olf-1, and Homol/Mmot1.

96. (Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of glia enriched bHLHs, OLIG proteins, Olig1, Olig2/protein kinase C-binding protein RACK17, Olig3, bHLH family of negative regulators, Ids, Id1, Id2, Id3, Id4, DIP1, HES, HES1, HES2,

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HES3, HES4, HES5, HES6, HES7, SHARP, SHARP1/DEC-2/eip1/Stra13, SHARP2/DEC-1/TR00067497_p, Hey/HRT proteins, HeyL/HRT3, Hey1/HRT1/HERP-2/HESR-2, Hey2/HRT2/HERP-1, HRT3, Lyl family, Lyl-1, Lyl-2, RGS family, RGS1, RGSRGS2/GOS8, RGS3/RGP3, capsulin, CENP-B, Mist1; Nhlh1, MOP3, Scleraxis, TCF15, bA305P22.3, and lpf-1/Pdx-1/Idx-1/Stf-1/Iuf-1/Gsf.

97. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of beta-catenin, GSK3, Groucho proteins, Groucho-1, Groucho-2, Groucho-3, Groucho-3, TCF family, TCF1A, B, C, D, E, F, G/LEF-1, TCF3, and TCF4, PC4, and MBF1.

98. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of Delta family, Serrate family, Jagged family, Dll1, Dll3, Dll4, Jagged1, Jagged2, Serrate2, Notch family, Notch1, Notch2, Notch3, Notch4, TAN-1, Bearded family, E(spl)m.alpha., E(spl)m2, E(spl)m4, E(spl)m6, Fringe family, Mfng, Rfng, Lfng, Deltex/dx-1, MAML1, RBP-Jk/CBF1/Su(H)/KBF2, and RUNX.

99. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of Chordin, Noggin, Follistatin, SMAD proteins, SMAD1, SMAD2, SMAD3, SMAD4, SMAD5, SMAD6, SMAD7, SMAD8, SMAD9, SMAD10, SHH, IHH, Su(fu), GLI family, GLI/GLI1, Gli2, Gli3, Zic family, Zic/Zic1, Zic2, and Zic3).

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100. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of a Wing helix/forkhead family of transcription factors, BF proteins, BF1, BF-2/Freac4, Fkh5/Foxb1/HFH-e5.1/Mf3, and Fkh6/Freac7.

101. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of HMG transcription factors, Sox proteins, Sox1, Sox2, Sox3, Sox4, Sox6, Sox10, Sox11, Sox13, Sox14 Sox18, Sox21, Sox22, Sox30, HMGIX, HMGIC, HMGIY, and HMG-17.

102. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of Hox proteins, Evx family, Evx1, Evx2, Mox family, Mox1, Mox2, NKL family, NK1, NK3, Nkx3.1, NK4, Lbx family, Lbx1, Lbx2, Tlx family, Tlx1, Tlx2, Tlx3, Emx/Ems family, Emx1, Emx2, Vax family, Vax1, Vax2, Hmx family, Hmx1, Hmx2, Hmx3, NK6 family, Nkx6.1, Msx/Msh family, Msx-1, Msx-2, Cdx, Cdx1, Cdx2, Xlox family, Lox3, Gsx family, Goosecoid, GSX, GSCL, En family, En-1, En-2, HB9 family, Hb9/HLXB9, Gbx family, Gbx1, Gbx2, Dbx family, Dbx-1, Dbx-2, Dll family, Dlx-1, Dlx-2, Dlx-4, Dlx-5, Dlx-7, Iroquois family, Xiro1, Irx2, Irx3, Irx4, Irx5, Irx6, Nkx, Nkx2.1/TTF-1, Nkx2.2/TTF-2, Nkx2.8, Nkx2.9, Nkx5.1, Nkx5.2, PBC family, Pbx1a, Pbx1b, Pbx2, Pbx3, Prd family, Otx-1, Otx-2, Phox2a, Phox2B, Ptx family, Pitx2, Pitx3/Ptx3, XANF family, Hesx1/XANF-1, BarH family, BarH, Brx2, Cut, and Gtx.

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103. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of POU domain factor proteins, Brn2/XlPou2, Brn3a, Brn3b, Brn4/POU3F4, and Brn5/Pou6F1.

104. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of transcription factors with a homeodomain region plus a LIM region, Isl1, Lhx2, Lhx3, Lhx4, Lhx5, Lhx6, Lhx7, Lhx9, LMO family, LMO1, LMO2, and LMO4.

105. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of Paired box transcription factors, Pax2, Pax3, Pax5, Pax6, Pax7, and Pax8.

106. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of GATA family, Gata1, Gata2, Gata3, Gata4/5, Gata6, MyT family, MyT1, MyT11, MyT2, MyT3, SAL family HSa11, Sal2, Sal13, REST/NRSF/XBR, Snail family, Scratch/Scrt, Zf289, FLJ22251, MOZ, ZFP-38/RU49, Pzf, Mtsh1/teashirt, MTG8/CBF1A-homolog, TIS11D/BRF2/ERF2, TTF-I interacting peptide 21, Znf-HX, Zhx1, KOX1/NGO-St-66, ZFP-15/ZN-15, Znf20, ZFP200, ZNF/282, HUB1, Finb/RREB1, Nuclear Receptors, liganded, ER family, TR family, RAR familiy, RXR family, PML-RAR family, PML-RXR family, Not1/Nurr, ROR, COUP-TF family, COUP-TF1, and COUP-TF2.

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107. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of RING finger transcription factor proteins, KIAA0708, Bfp/ZNF179, BRAP2, KIAA0675, LUN, NSPc1, Neuralized family, neu/Neur-1, Neur-2, Neur-3, Neur-4, RING1A, SSA1/RO52, ZNF173, PIAS family, PIAS-alpha, PIAS-beta, PIAS-gamma, parkin family, and ZNF127 family.

108. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of proteins relating to cell-cycle progression-dedicated components that are part of the RNA polymerase II transcription complex, E2F family, E2F-1, E2F-3, E2F-4, E2F-5, DP family, DP-1, DP-2, p53 family, p53, p63, p73, mdm2; ATM, RB family, RB, p107, and p130.

109. (Withdrawn, Currently Amended) The method of Claim 67, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of factors involved in splicing.

110. (Withdrawn, Currently Amended) The method of Claim 109 [[67]], wherein at least one of the factor types involved in splicing is chosen from the group consisting of Hu family, HuA, HuB, HuC, HuD, Musashi1, Nova family, Nova1, Nova2, SR proteins, B1C8, B4A11, ASF SRp20, SRp30, SRp40, SRp55, SRp75, SRm160, SRm300,

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CC1.3/CC1.4, Def-3/RBM6, SIAHBP/PUF60, Sip1, C1QBP/GC1Q-R/HABP1/P32, Staufen, TRIP, Zfr, CPSF, and Inducible poly(A)-Binding Protein (U33818).

111-134 (Cancelled)

Please add new claims 135-136:

135. (New) The method of Claim 96, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of HMG transcription factors, Sox proteins, Sox1, Sox2, Sox3, Sox4, Sox6, Sox10, Sox11, Sox13, Sox14, Sox18, Sox21, Sox22, Sox30, HMGIX, HMGIC, HMGIY, and HMG-17.

136. (New) The method of Claim 135, wherein at least one of the plurality of transcription factor types is chosen from the group consisting of Hox proteins, Evx family, Evx1, Evx2, Mox family, Mox1, Mox2, NKL family, NK1, NK3, Nkx3.1, NK4, Lbx family, Lbx1, Lbx2, Tlx family, Tlx1, Tlx2, Tlx3, Emx/Ems family, Emx1, Emx2, Vax family, Vax1, Vax2, Hmx family, Hmx1, Hmx2, Hmx3, NK6 family, Nkx6.1, Msx/Msh family, Msx-1, Msx-2, Cdx, Cdx1, Cdx2, Xlox family, Lox3, Gsx family, Goosecoid, GSX, GSCL, En family, En-1, En-2, HB9 family, Hb9/HLXB9, Gbx family, Gbx1, Gbx2, Dbx family, Dbx-1, Dbx-2, Dll family, Dlx-1, Dlx-2, Dlx-4, Dlx-5, Dlx-7, Iroquois family, Xiro1, Irx2, Irx3, Irx4, Irx5, Irx6, Nkx, Nkx2.1/TTF-1, Nkx2.2/TTF-2, Nkx2.8, Nkx2.9, Nkx5.1, Nkx5.2, PBC family, Pbx1a, Pbx1b, Pbx2, Pbx3, Prd family, Otx-1, Otx-2, Phox2a, Phox2B, Ptx family, Pitx2, Pitx3/Ptx3, XANF family, Hesx1/XANF-1, BarH family, BarH, Brx2, Cut, and Gtx.